DOCKET: 9no52260

FIG.1

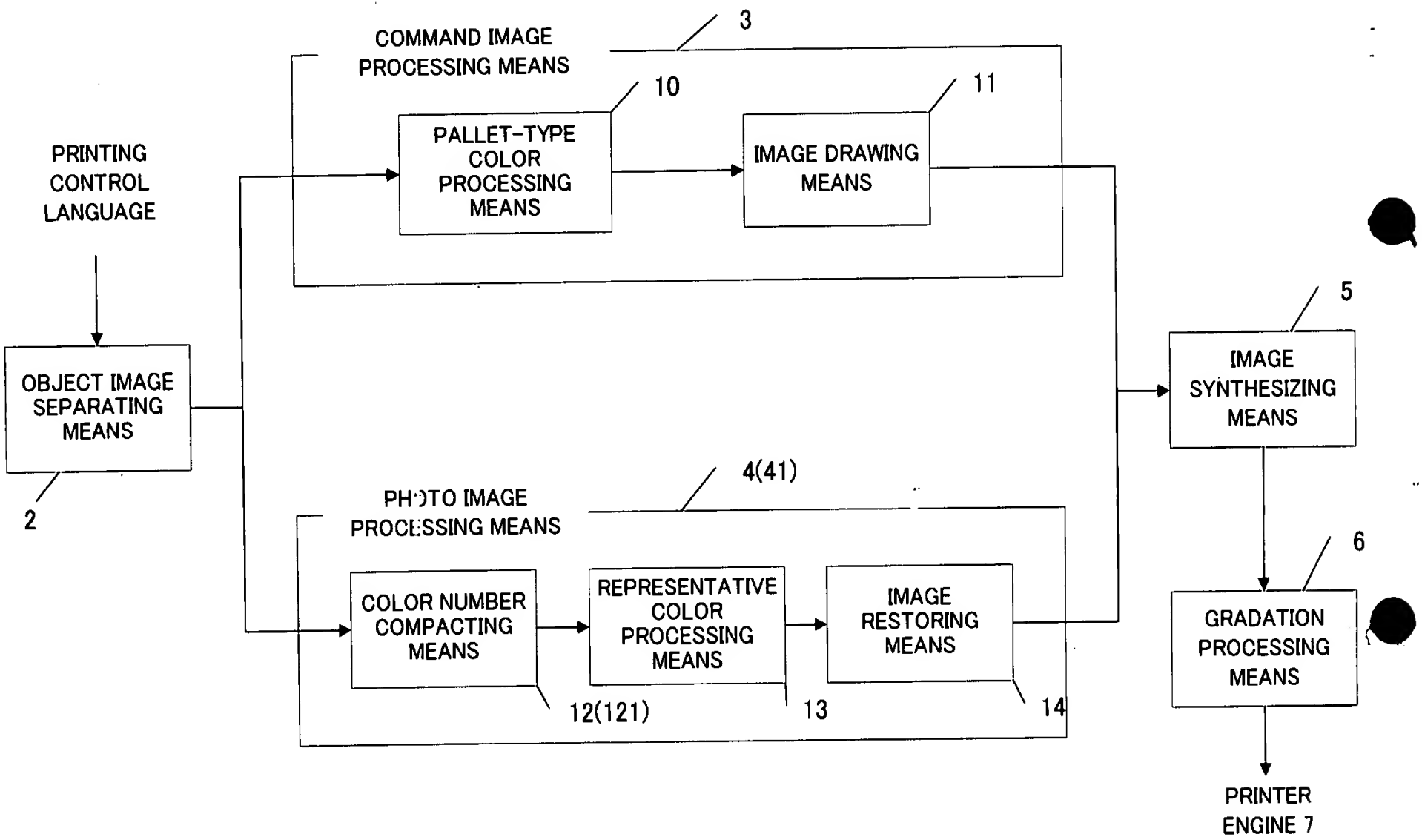


FIG.2

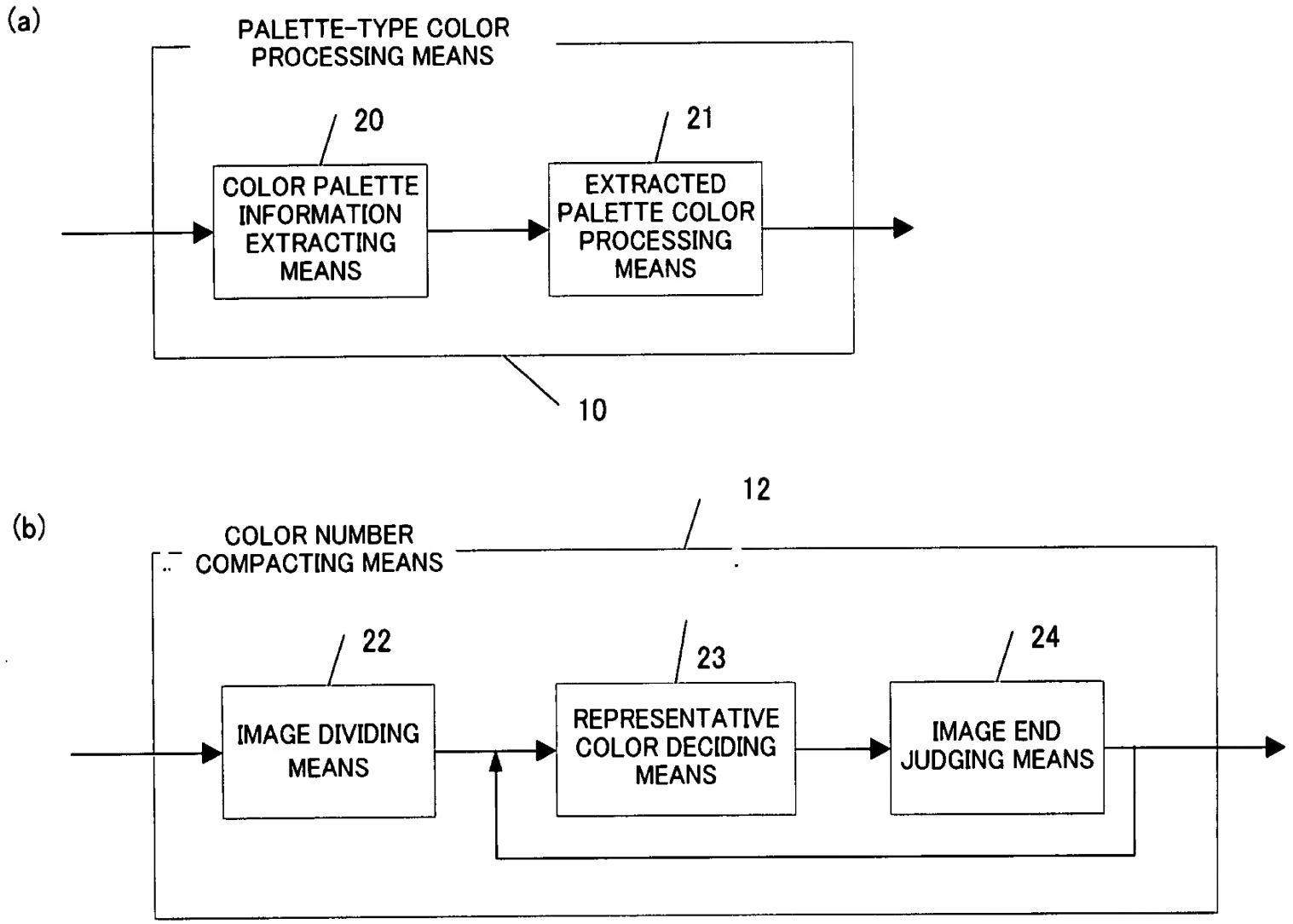

(a)
PALETTE-TYPE COLOR PROCESSING MEANS
20
21
COLOR PALETTE INFORMATION EXTRACTING MEANS
EXTRACTED PALETTE COLOR PROCESSING MEANS
10
(b)
12
COLOR NUMBER COMPACTING MEANS
22
23
24
IMAGE DIVIDING MEANS
REPRESENTATIVE COLOR DECIDING MEANS
IMAGE END JUDGING MEANS

FIG.3

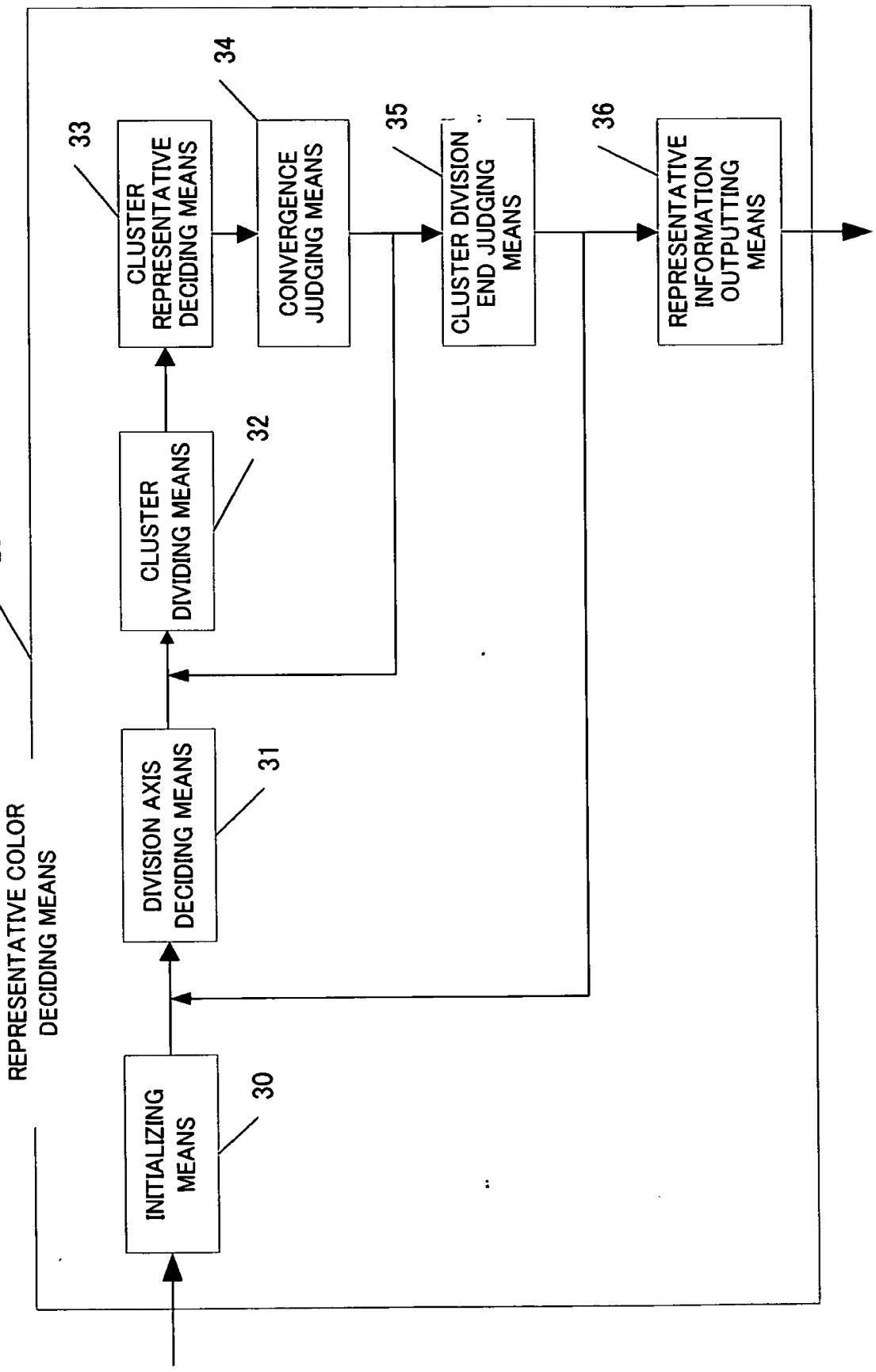
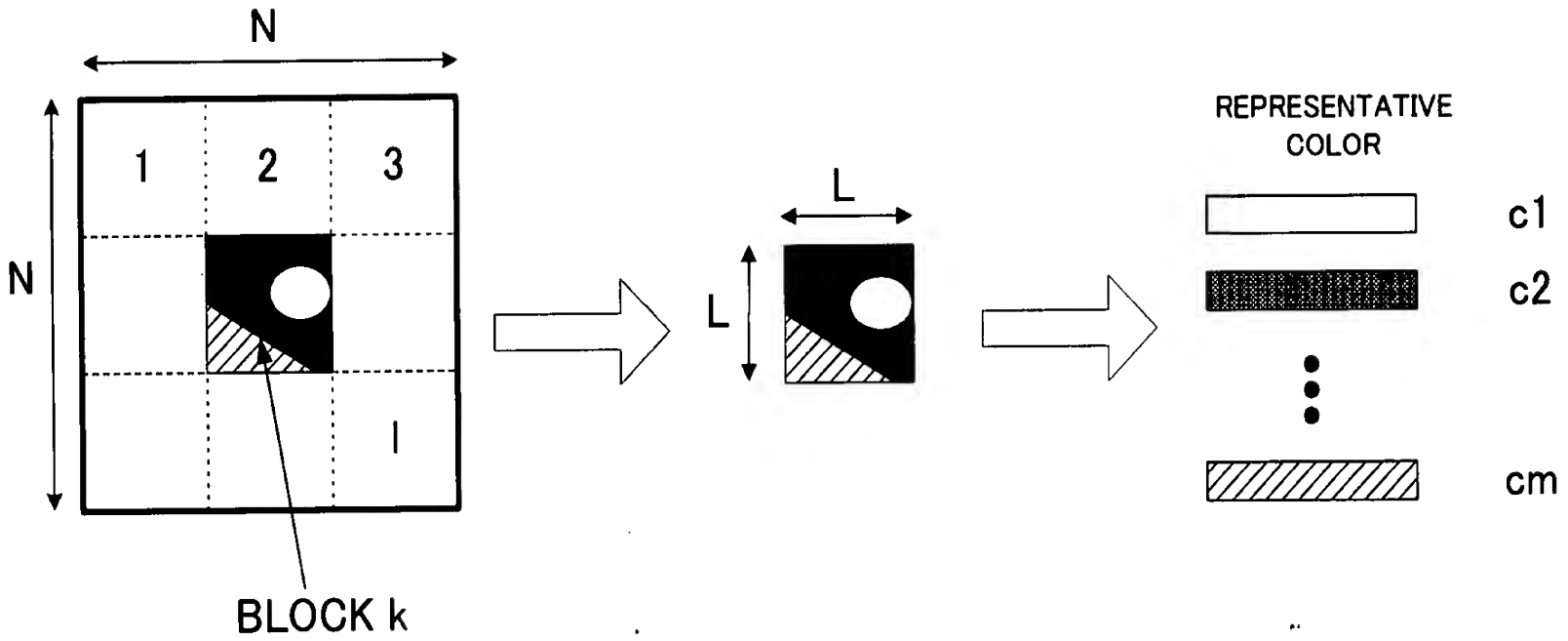

REPRESENTATIVE COLOR DECIDING MEANS
23
INITIALIZING MEANS
30
DIVISION AXIS DECIDING MEANS
31
CLUSTER DIVIDING MEANS
32
CLUSTER REPRESENTATIVE DECIDING MEANS
33
CONVERGENCE JUDGING MEANS
34
CLUSTER DIVISION END JUDGING MEANS
35
REPRESENTATIVE INFORMATION OUTPUTTING MEANS
36

FIG.4

(a)



(b)

c2	c2	c2	c2
c2	c2	c1	c1
cm	c2	c1	c1
cm	cm	cm	c2

BLOCK k

FIG.5

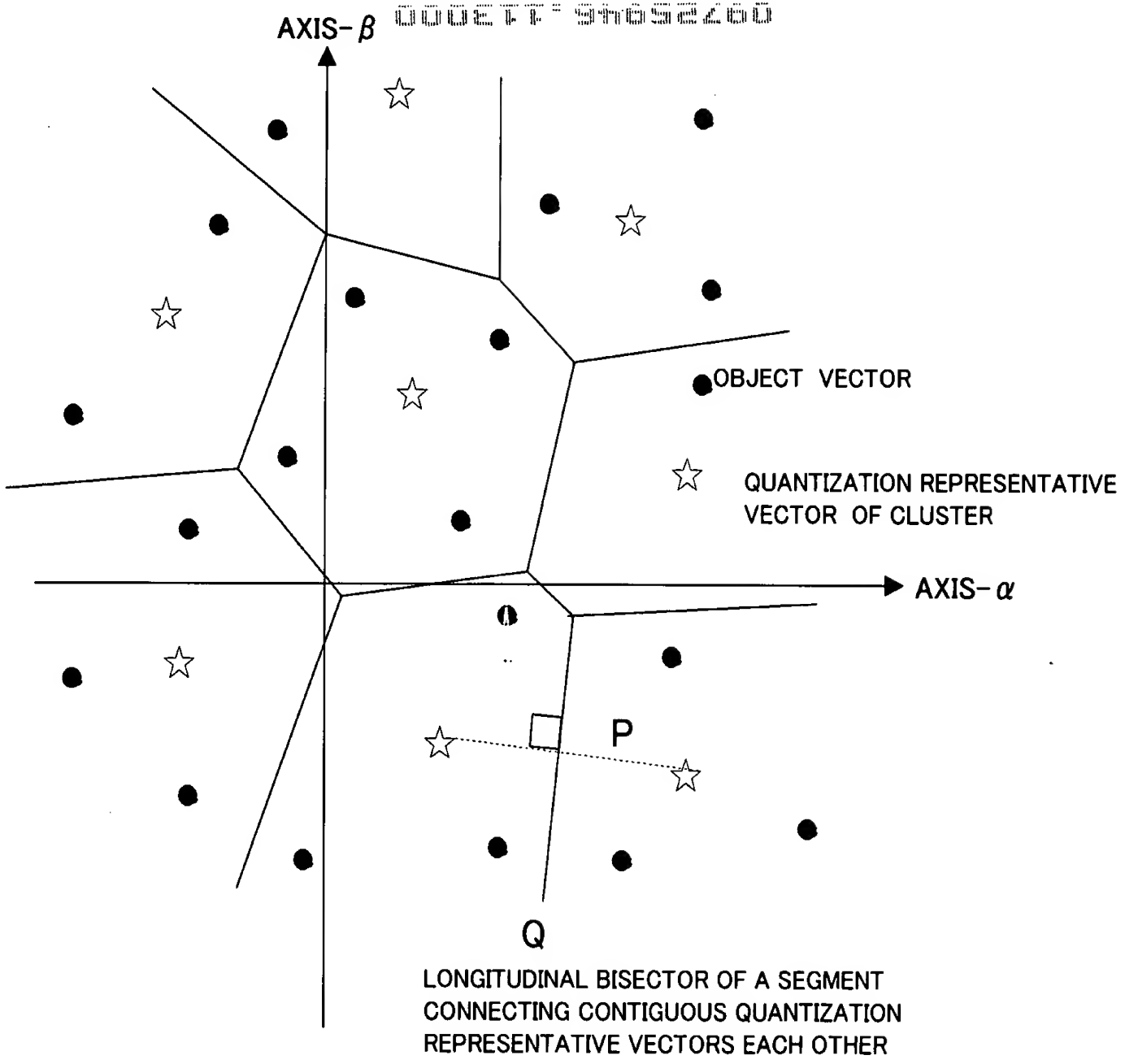

AXIS-β
OBJECT VECTOR
QUANTIZATION REPRESENTATIVE VECTOR OF CLUSTER
AXIS-α
P
Q
LONGITUDINAL BISECTOR OF A SEGMENT CONNECTING CONTIGUOUS QUANTIZATION REPRESENTATIVE VECTORS EACH OTHER

FIG.6

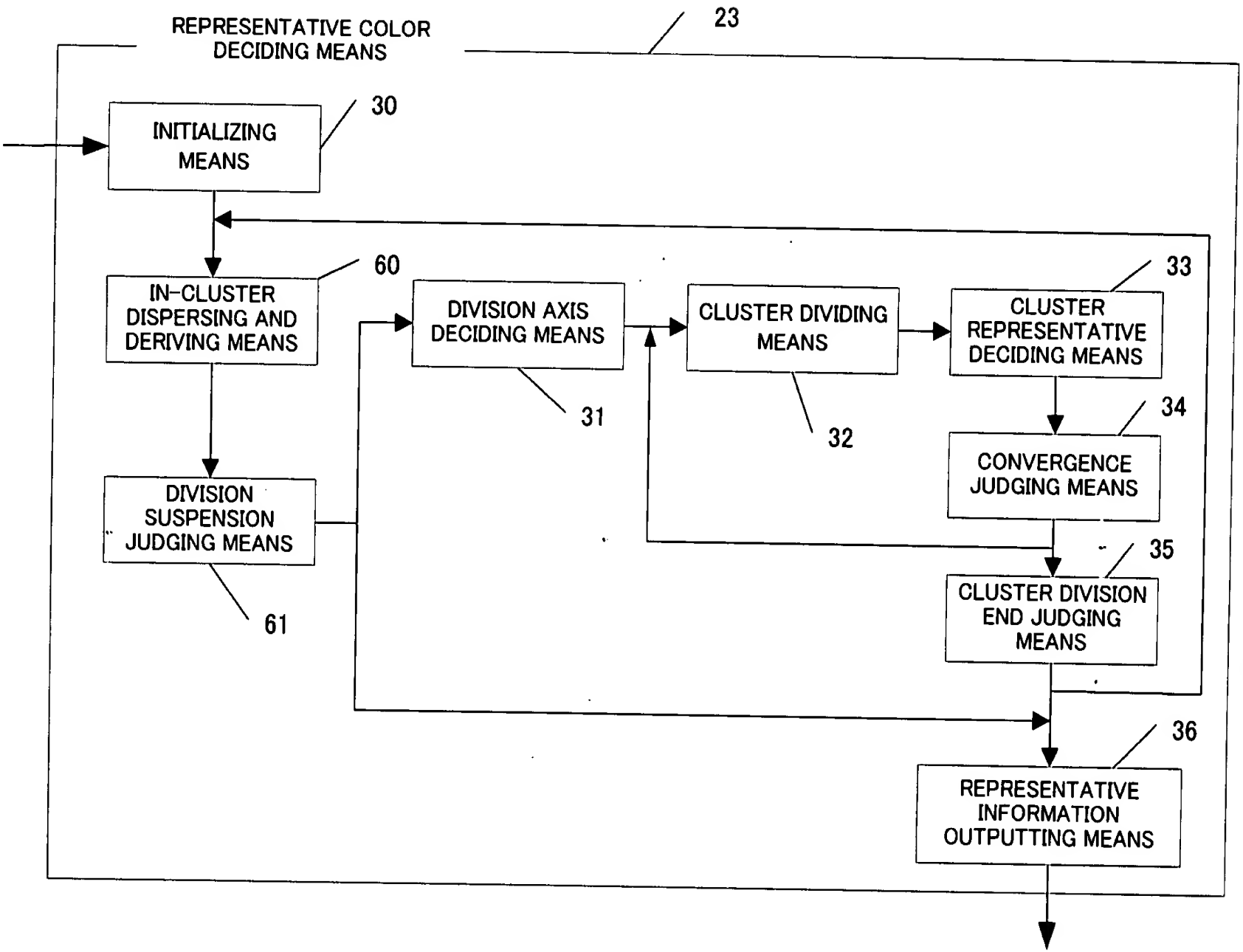

REPRESENTATIVE COLOR DECIDING MEANS
23
INITIALIZING MEANS
30
IN-CLUSTER DISPERSING AND DERIVING MEANS
60
DIVISION SUSPENSION JUDGING MEANS
61
DIVISION AXIS DECIDING MEANS
31
CLUSTER DIVIDING MEANS
32
CLUSTER REPRESENTATIVE DECIDING MEANS
33
CONVERGENCE JUDGING MEANS
34
CLUSTER DIVISION END JUDGING MEANS
35
REPRESENTATIVE INFORMATION OUTPUTTING MEANS
36

FIG.7

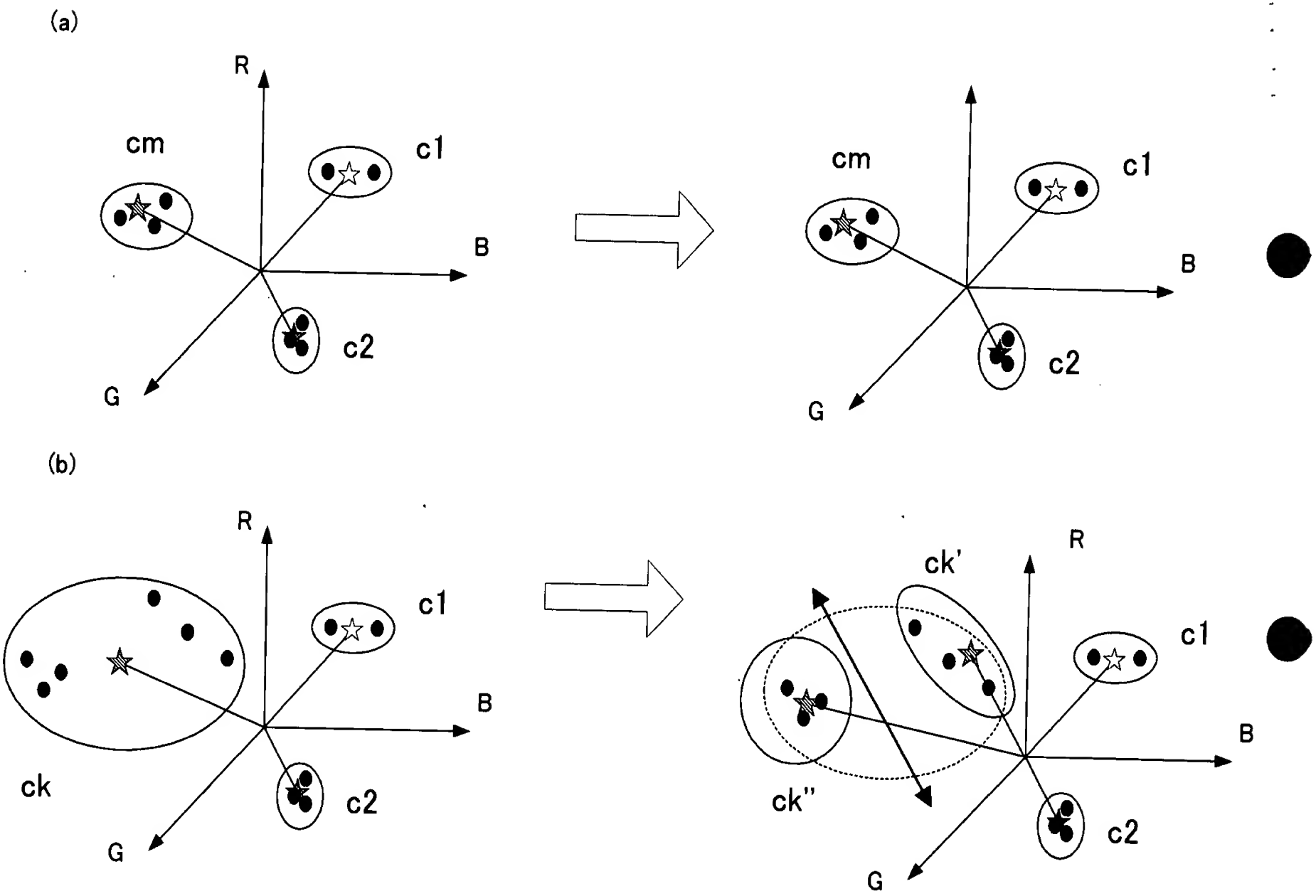


FIG.8

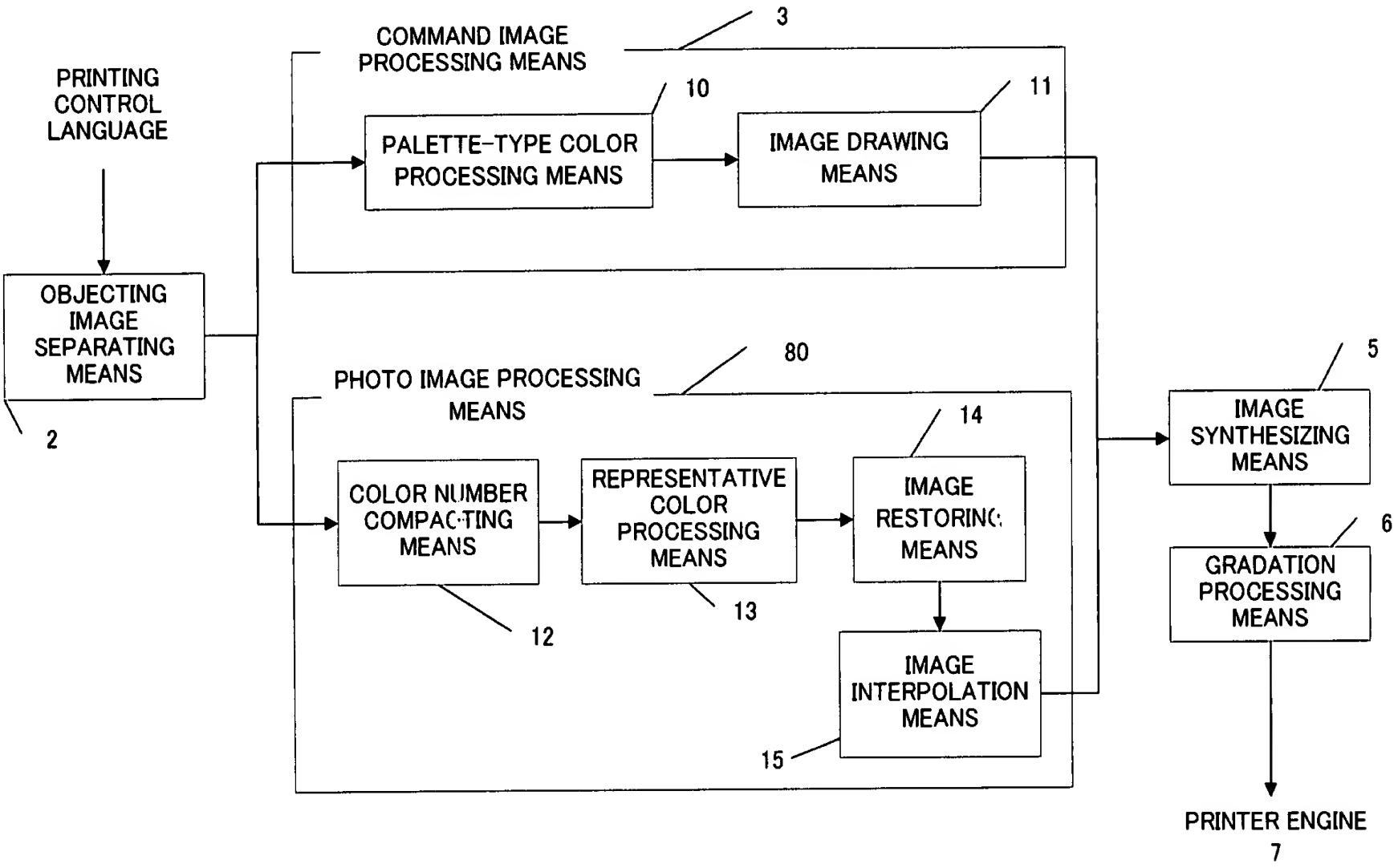
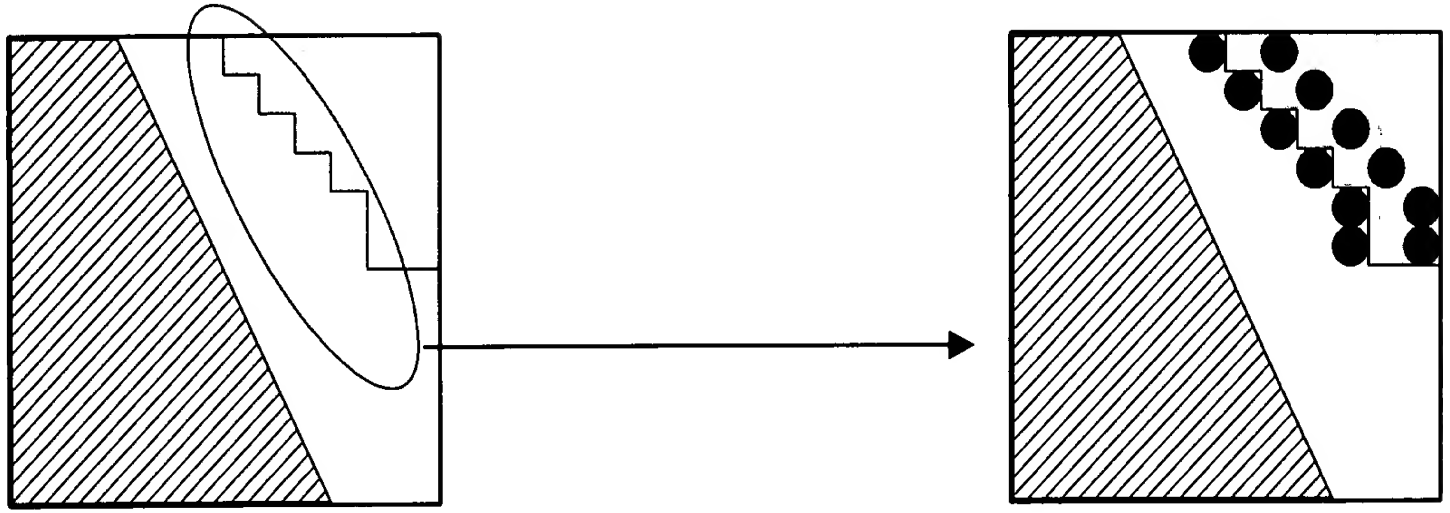
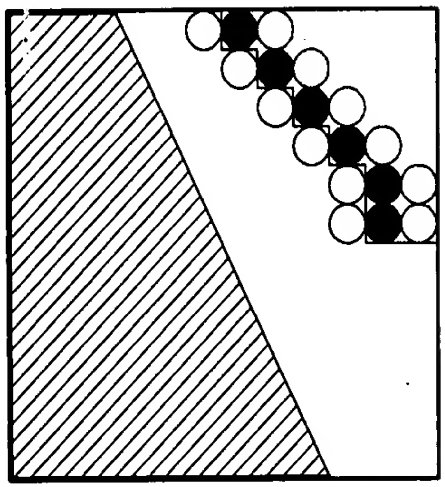

PRINTING CONTROL LANGUAGE
OBJECTING IMAGE SEPARATING MEANS
2
COMMAND IMAGE PROCESSING MEANS
3
PALETTE-TYPE COLOR PROCESSING MEANS
10
IMAGE DRAWING MEANS
11
PHOTO IMAGE PROCESSING MEANS
80
COLOR NUMBER COMPACTING MEANS
12
REPRESENTATIVE COLOR PROCESSING MEANS
13
IMAGE RESTORING MEANS
14
IMAGE INTERPOLATION MEANS
15
IMAGE SYNTHESIZING MEANS
5
GRADATION PROCESSING MEANS
6
PRINTER ENGINE
7

FIG.9



(a) RESTORED IMAGE

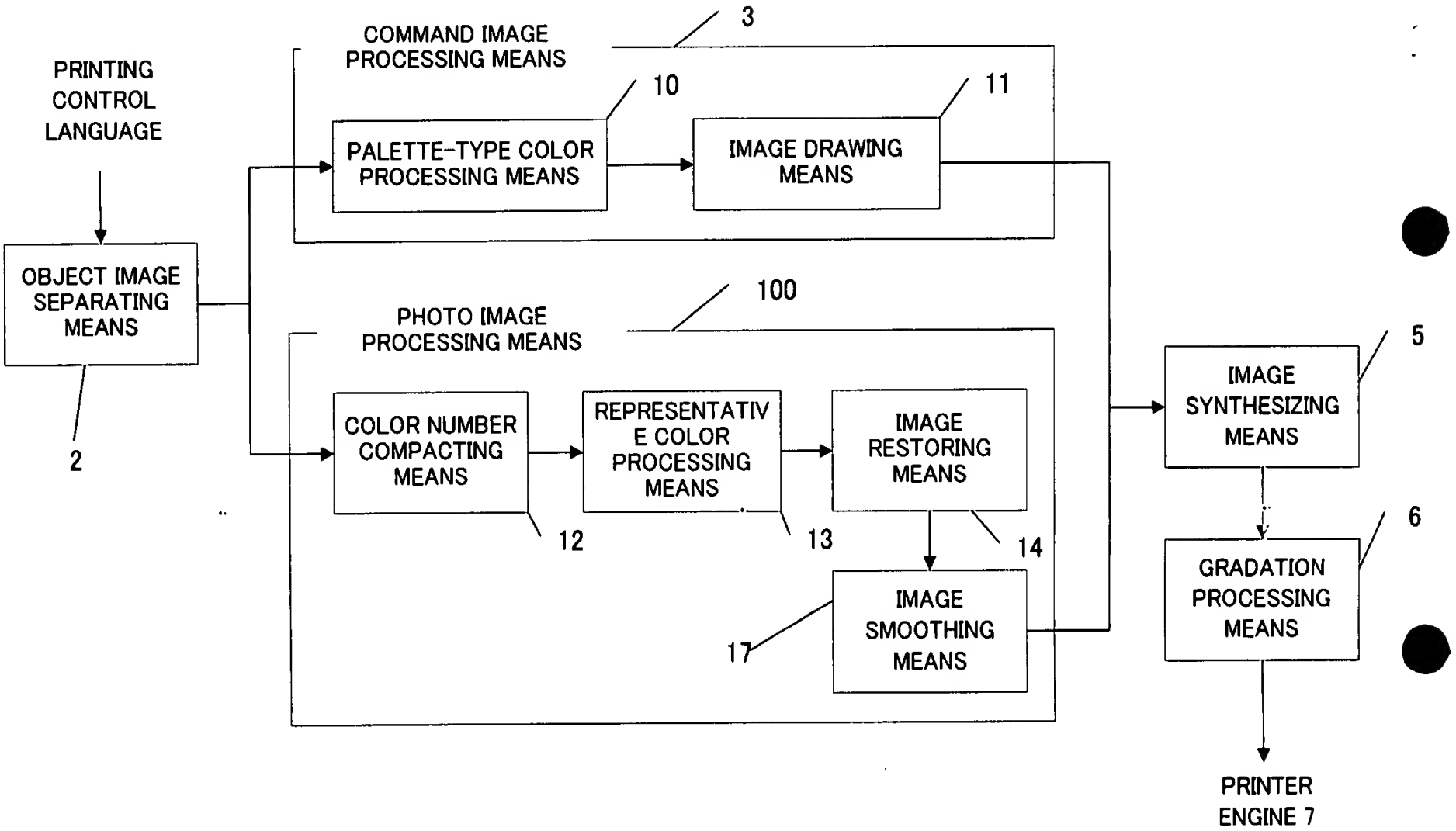
(b) THE EXTRACTING OF POSITON IN WHICH INTERPOLATION PICTURE ELEMENT IS EMBEDED



(c) THE EMBEDING OF INTERPOLATION PICTURE ELEMENTS

● : INTERPOLATION PICTURE ELEMENT

FIG.10


PRINTING CONTROL LANGUAGE
OBJECT IMAGE SEPARATING MEANS
2
COMMAND IMAGE PROCESSING MEANS
3
PALETTE-TYPE COLOR PROCESSING MEANS
10
IMAGE DRAWING MEANS
11
PHOTO IMAGE PROCESSING MEANS
100
COLOR NUMBER COMPACTING MEANS
12
REPRESENTATIVE COLOR PROCESSING MEANS
13
IMAGE RESTORING MEANS
14
IMAGE SMOOTHING MEANS
17
IMAGE SYNTHESIZING MEANS
5
GRADATION PROCESSING MEANS
6
PRINTER ENGINE 7

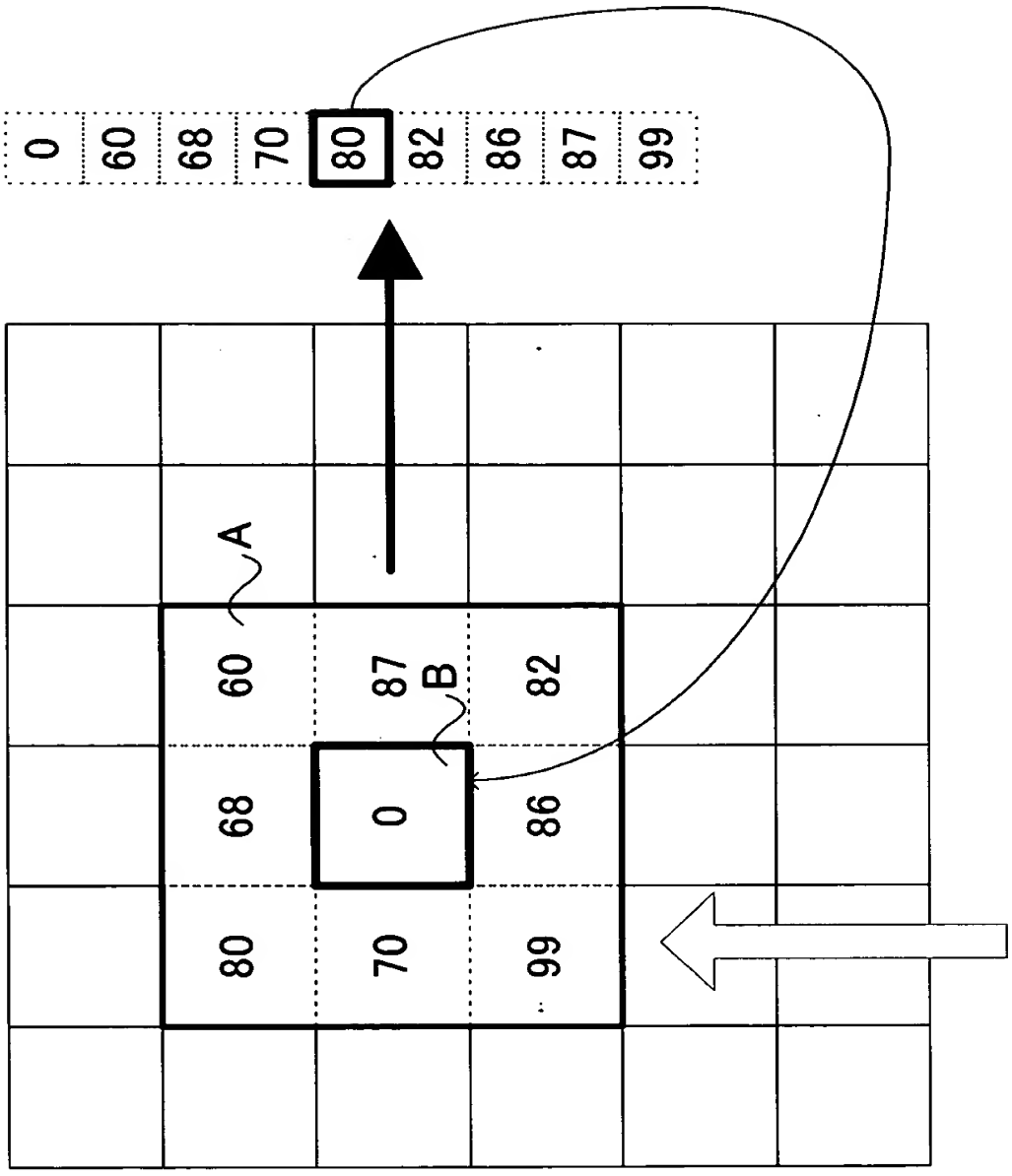


FIG.11

FIG.12

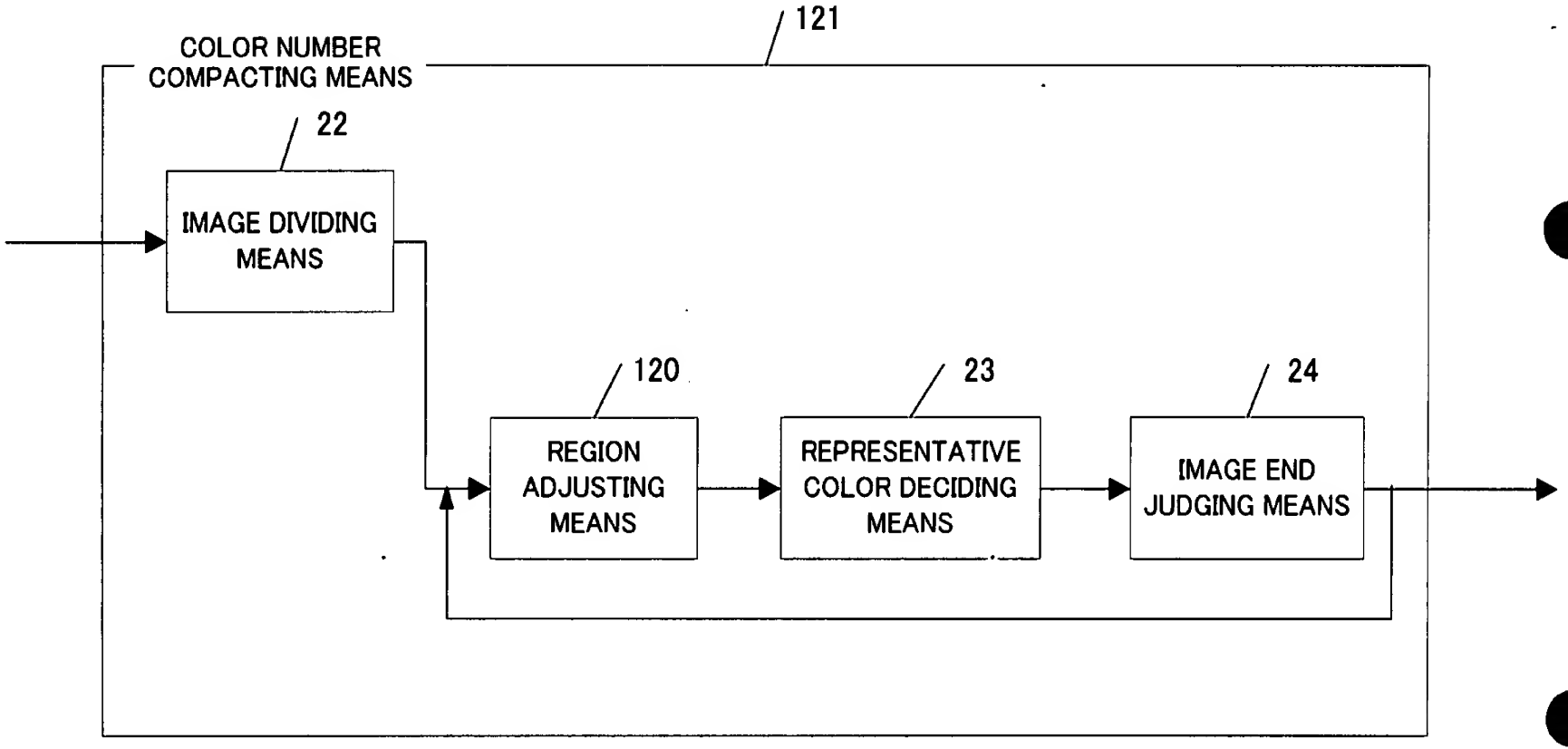

121
COLOR NUMBER COMPACTING MEANS
22
IMAGE DIVIDING MEANS
120
REGION ADJUSTING MEANS
23
REPRESENTATIVE COLOR DECIDING MEANS
24
IMAGE END JUDGING MEANS

FIG.13

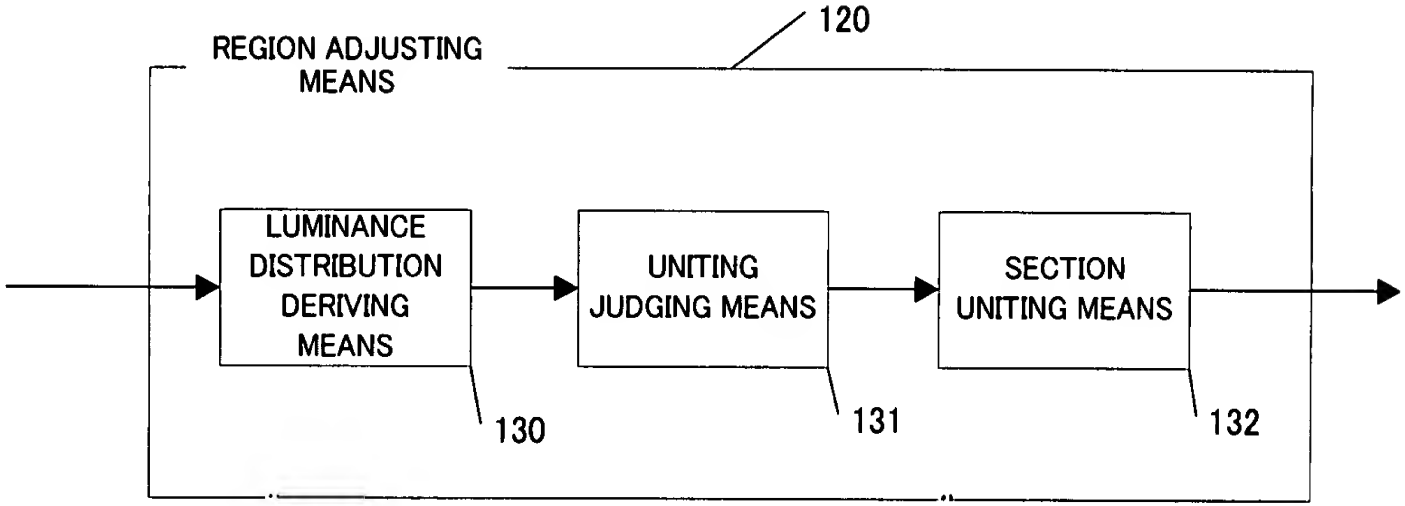

120
REGION ADJUSTING MEANS
LUMINANCE DISTRIBUTION DERIVING MEANS
130
UNITING JUDGING MEANS
131
SECTION UNITING MEANS
132

FIG.14

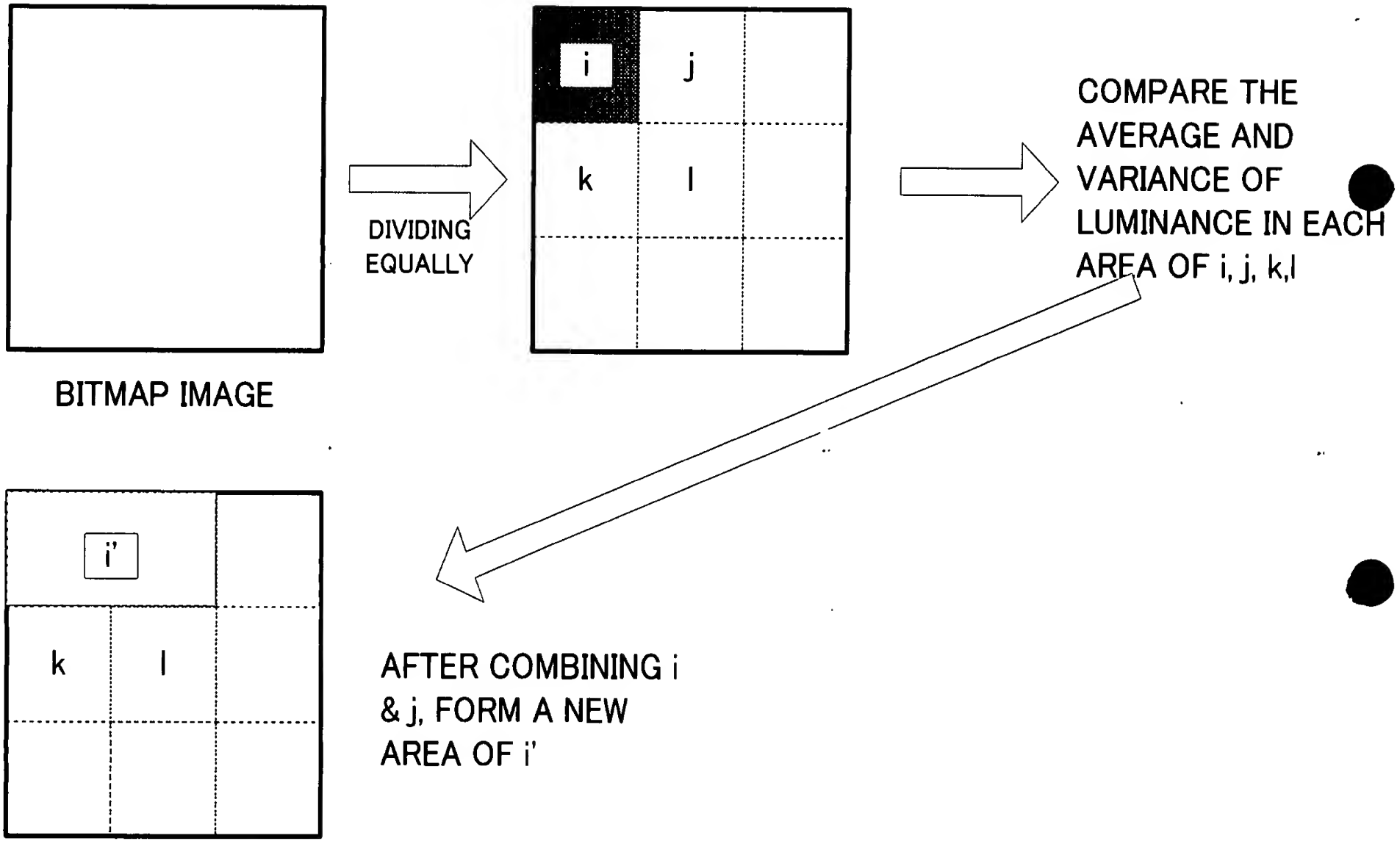

BITMAP IMAGE
DIVIDING EQUALLY
i
j
k
l
COMPARE THE AVERAGE AND VARIANCE OF LUMINANCE IN EACH AREA OF i, j, k,l
i'
k
l
AFTER COMBINING i & j, FORM A NEW AREA OF i'

FIG.15

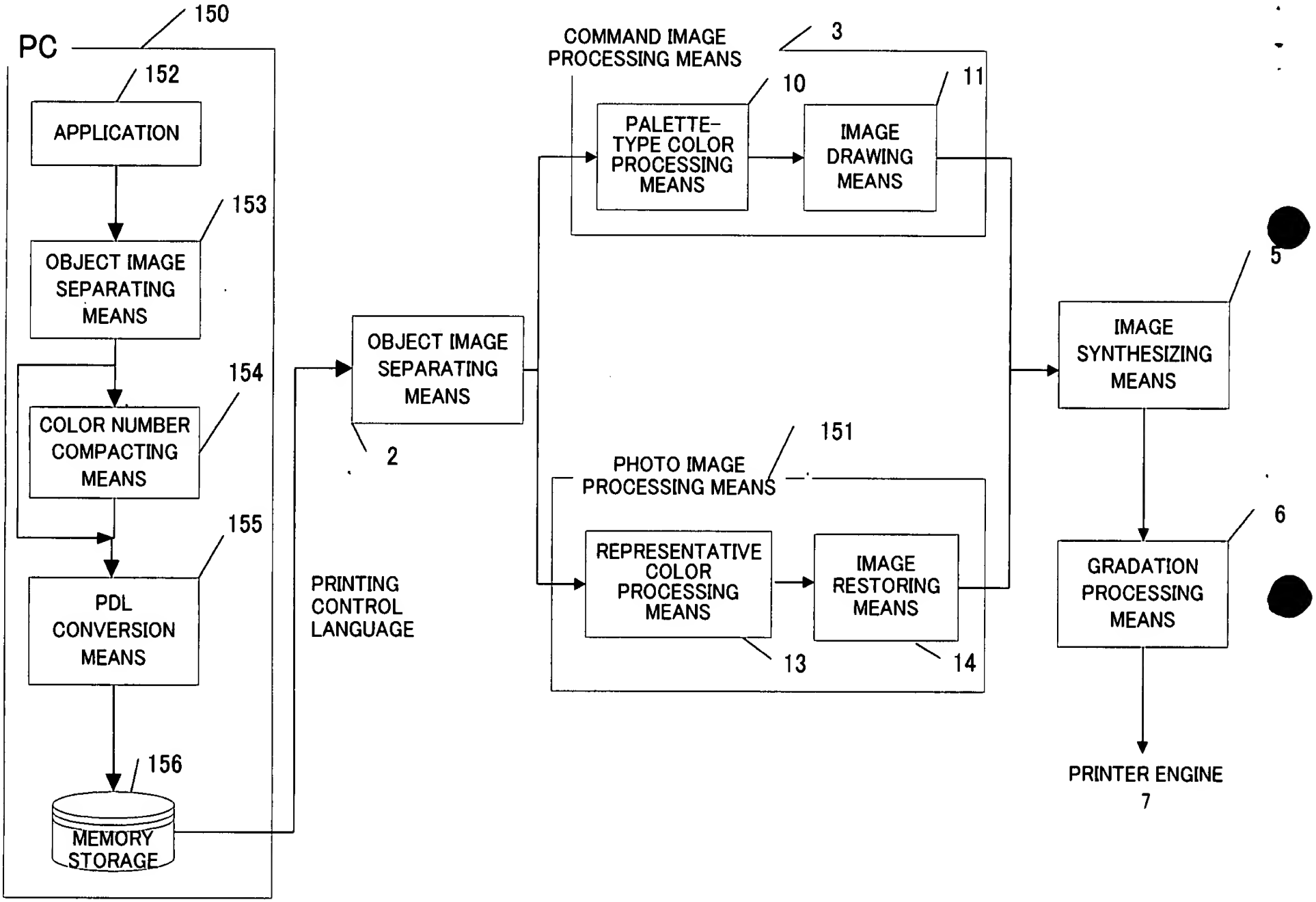

150
PC
152
APPLICATION
153
OBJECT IMAGE SEPARATING MEANS
154
COLOR NUMBER COMPACTING MEANS
155
PDL CONVERSION MEANS
156
MEMORY STORAGE
PRINTING CONTROL LANGUAGE
OBJECT IMAGE SEPARATING MEANS
2
COMMAND IMAGE PROCESSING MEANS
3
10
PALETTE-TYPE COLOR PROCESSING MEANS
11
IMAGE DRAWING MEANS
151
PHOTO IMAGE PROCESSING MEANS
REPRESENTATIVE COLOR PROCESSING MEANS
13
IMAGE RESTORING MEANS
14
5
IMAGE SYNTHESIZING MEANS
6
GRADATION PROCESSING MEANS
PRINTER ENGINE
7

FIG.16

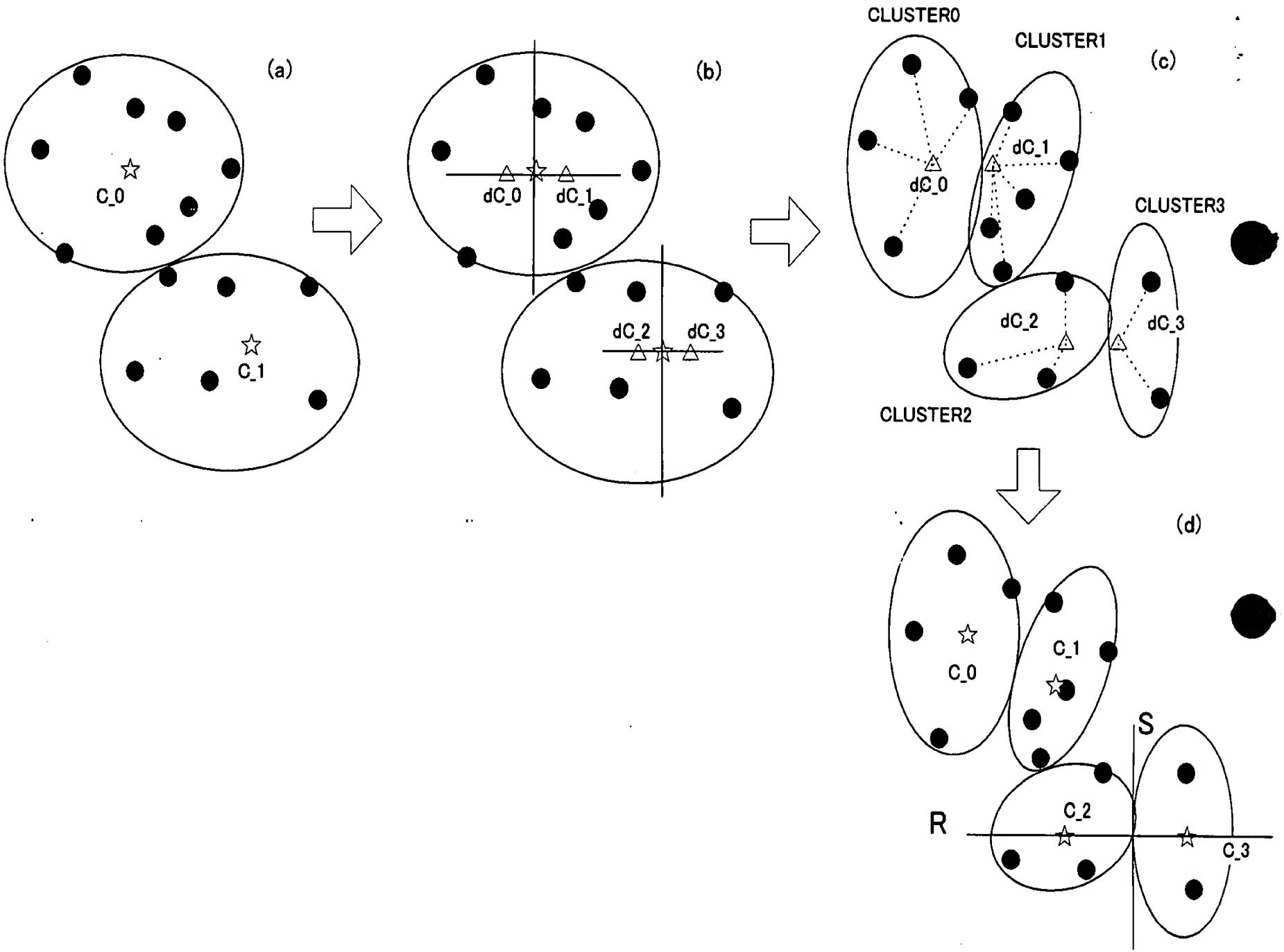

(a)
C_0
C_1
(b)
dC_0
dC_1
dC_2
dC_3
CLUSTER0
CLUSTER1
(c)
dC_0
dC_1
CLUSTER3
dC_2
dC_3
CLUSTER2
(d)
C_0
C_1
S
R
C_2
C_3

FIG.17

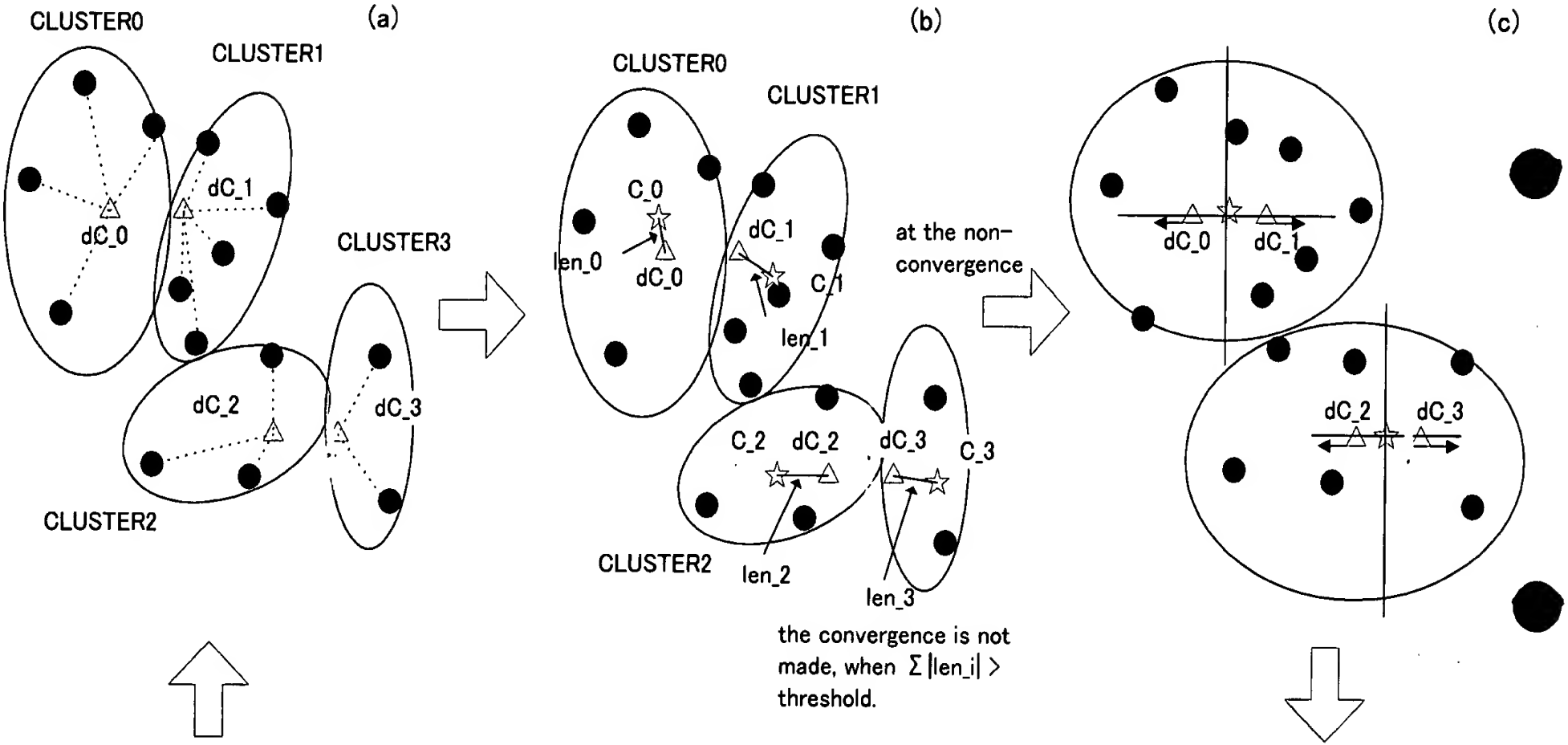


FIG.16(c)

FIG.16(c)

FIG.18

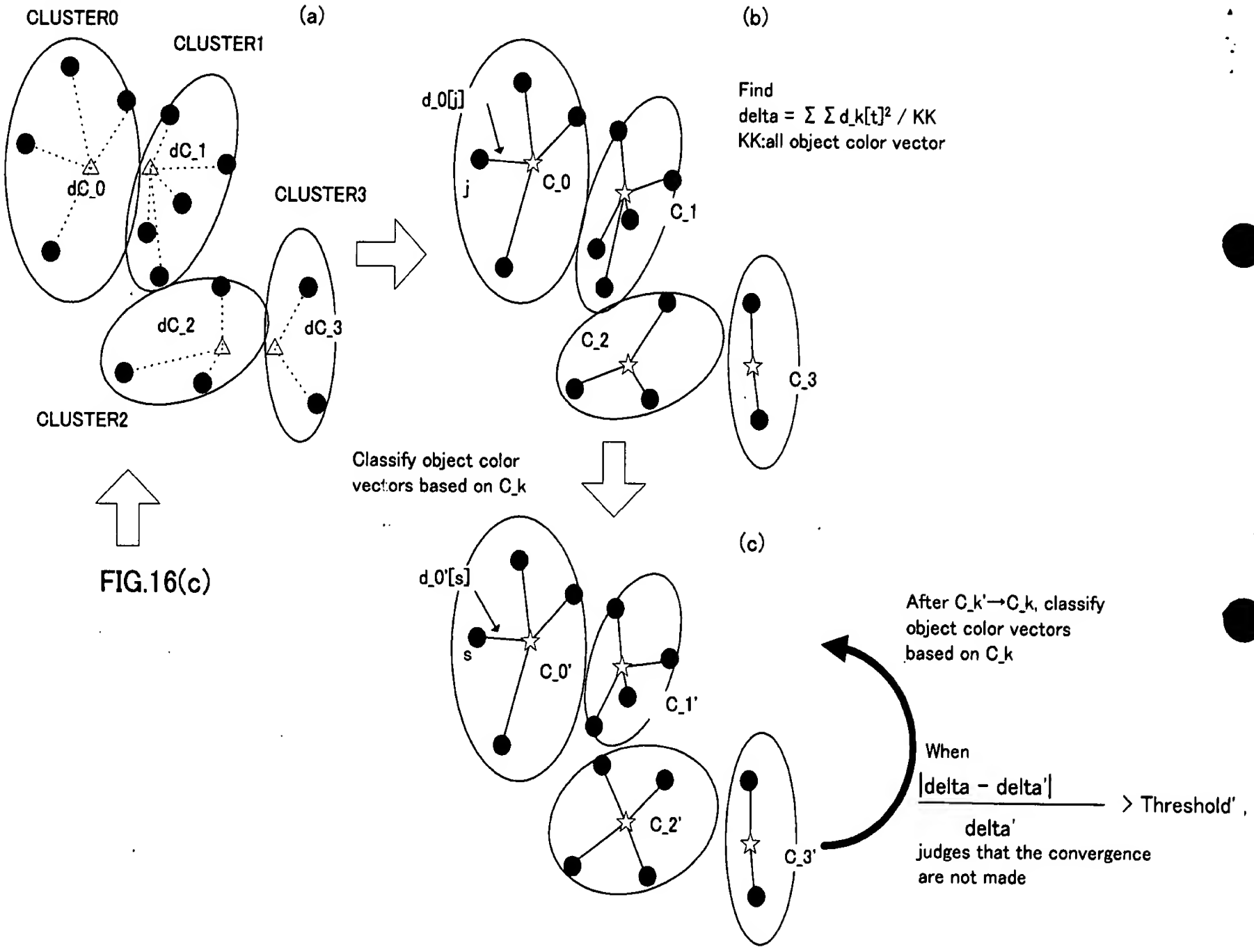


FIG.16(c)

FIG.19

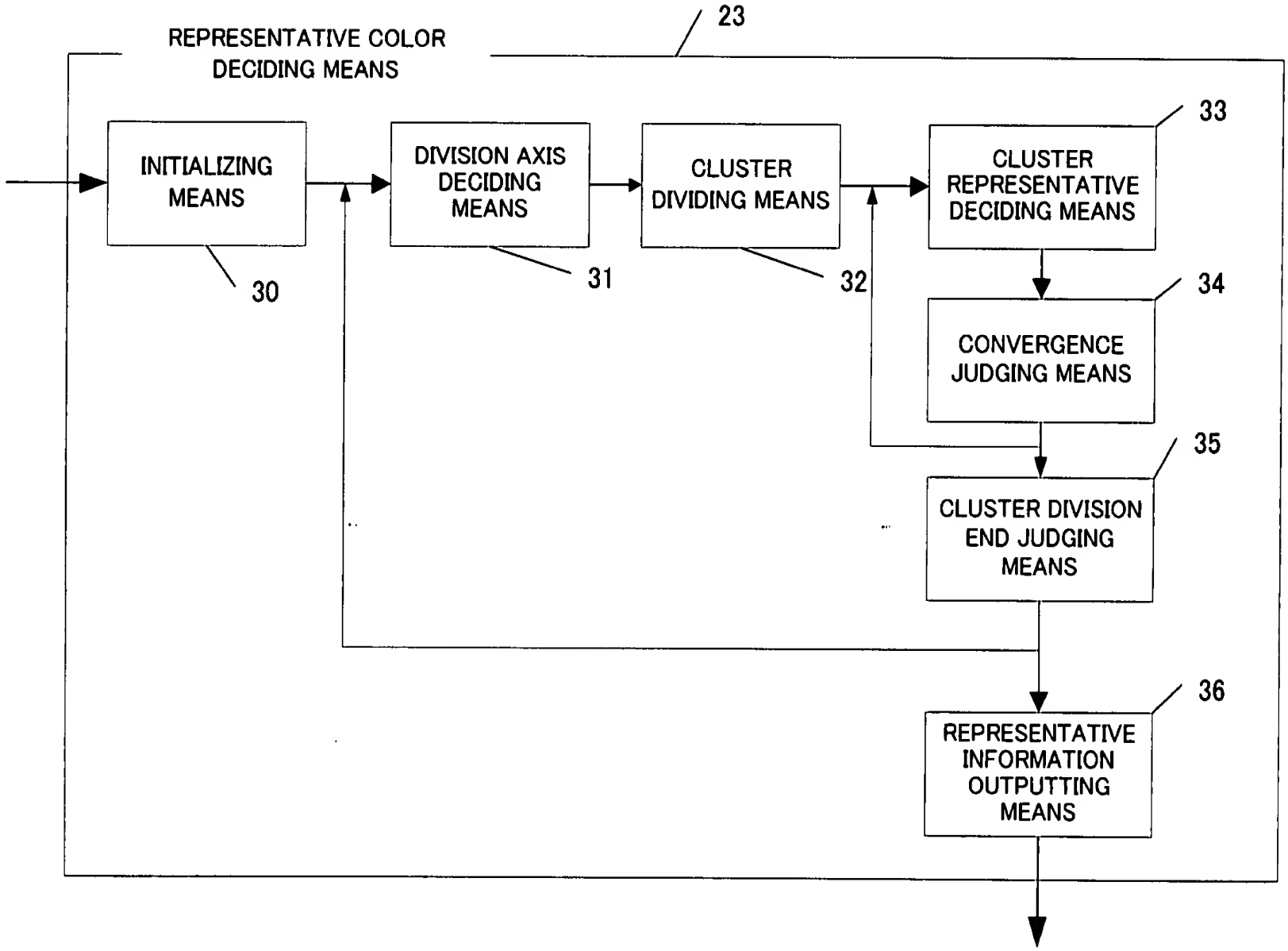
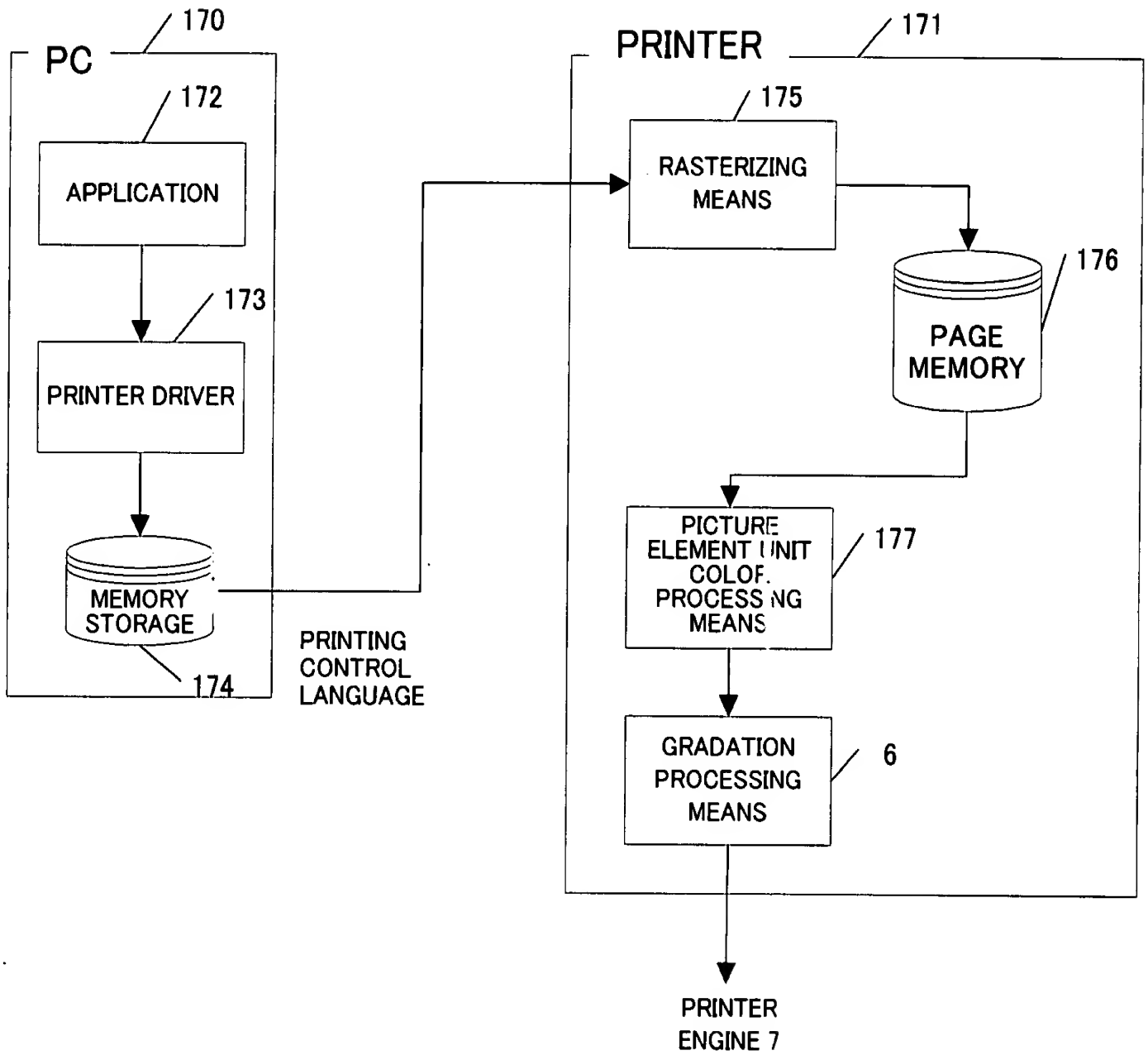

REPRESENTATIVE COLOR DECIDING MEANS
23
INITIALIZING MEANS
30
DIVISION AXIS DECIDING MEANS
31
CLUSTER DIVIDING MEANS
32
CLUSTER REPRESENTATIVE DECIDING MEANS
33
CONVERGENCE JUDGING MEANS
34
CLUSTER DIVISION END JUDGING MEANS
35
REPRESENTATIVE INFORMATION OUTPUTTING MEANS
36

FIG.20


PC
170
172
APPLICATION
173
PRINTER DRIVER
MEMORY STORAGE
174
PRINTING CONTROL LANGUAGE
PRINTER
171
175
RASTERIZING MEANS
176
PAGE MEMORY
PICTURE ELEMENT UNIT COLOR PROCESSING MEANS
177
GRADATION PROCESSING MEANS
6
PRINTER ENGINE 7